

SECTION C

C-1 ITEM DESCRIPTION

PCR-N-002, NUT RAISIN MIX

Styles.

- Style A - Meal, Cold Weather (MCW)
- Style B - Food Packet, Long Range Patrol (LRP)
- Style C - Meal, Ready to Eat (MRE)

Unless otherwise specified the following applies to all styles:

Each component is consumed by combat personnel under worldwide environmental extremes as part of an operational ration, and is a source of nutritional intake.

C-2 PERFORMANCE REQUIREMENTS

A. Product standard. A sample shall be subjected to first article or product demonstration model inspection as applicable in accordance with the tests and inspections of Section E of this Performance-based Contract Requirements document.

B. Shelf life. The packaged nut raisin mix shall meet the minimum shelf life requirement of 36 months at 80° F.

C. Grade standards. The grade standards for nut and raisin components shall be as follows.

(1) Peanuts. U.S. Standards for Grades of Shelled Spanish Type Peanuts, Grade - U.S. No. 1 Spanish or U.S. Standards for Shelled Runner Type Peanuts, Grade - U.S. No. 1 Runner or U.S. Standards for Shelled Virginia Type Peanuts, Grade - U.S. No. 1 Virginia. The peanuts shall be blanched, skinless and dry roasted. The peanuts shall be aflatoxin negative. The peanuts shall be uniformly coated with a transparent food grade material that aids in reduction of oxidative rancidity.

(2) Walnuts. U.S. Standards for Shelled English Walnuts, Grade - U.S. Commercial, Size - pieces. Walnut piece color classification shall be amber or lighter. The walnuts shall be uniformly coated with a transparent food grade material that aids in reduction of oxidative rancidity.

(3) Almonds. U.S. Standards for Grades of Shelled Almonds, Grade - U.S. Standard Sheller Run, Size - count range per ounce either 23 to 25 inclusive, 24 to 26 inclusive, or 26 to 28 inclusive.

(4) Filberts. U.S. Standards for Grades of Filberts in the Shell, Grade - U.S. No. 1, Classification - round type varieties, medium or small.

(5) Raisins. U.S. Standards for Grades of Processed Raisins, Type I - seedless, Grade - U.S. Grade B or better except that the moisture content of the raisins shall not less than 13.0 percent and not be greater than 15.0 percent. The raisins shall be coated with hydrogenated vegetable oil.

D. Appearance. The finished product shall be a mixture of nuts and raisins. The final blended product shall be free of clumped nuts and raisins such that the product is free flowing and clumps can be broken with light finger pressure. The packaged food shall be free from foreign material. The final packaged product shall contain 62.0 to 67.0 percent peanuts, 13.0 to 17.0 percent raisins, 8.0 to 12.0 percent walnuts, 4.0 to 7.0 percent almonds and 4.0 to 7.0 percent filberts.

E. Odor and flavor.

(1) General. The product shall possess an odor and flavor considered characteristic of unsalted, shelled, walnuts, almonds, filberts, roasted peanuts, and raisins.

(2) Foreign. The packaged food shall be free from foreign odors and flavors.

F. Texture.

(1) Nut mix. The nut mix shall be firm to crunchy.

(2) Raisins. The raisins shall be moist and chewy.

G. Weight. The net weight shall be not less than 56 grams.

H. Palatability and overall appearance. The finished product shall be equal to or better than the approved product standard in palatability and overall appearance.

I. Nutrient content.

(1) Sodium content. The sodium content shall be not greater than 50 mg per 100 grams.

(4) Moisture content. The average moisture content shall be not greater than 4.6 percent and no individual pouch shall have a maximum value greater than 5.6 percent.

J. Oxygen content. The oxygen content of the filled and sealed pouch shall not exceed 2.0 percent.

K. Other. All nuts and raisins should be from the latest season's crop. The peanuts and walnuts should be protected by the types and amounts of antioxidants approved by the FDA for peanuts and walnuts except that the final product mix shall not have antioxidants exceeding approved limits.

C-3 MISCELLANEOUS INFORMATION

THE FOLLOWING IS PROVIDED FOR INFORMATION ONLY TO PROVIDE THE BENEFIT OF PAST GOVERNMENT EXPERIENCE. THIS IS NOT A MANDATORY CONTRACT REQUIREMENT.

A. Nut Raisin Mix

(1) Nut mix ingredients/formulation. Ingredient and formulation percentages for nut mix for two stage fill may be as follows:

<u>Ingredients</u>	<u>Percent by weight</u>
Peanuts, whole, roasted, coated	76.48
Walnuts, pieces, coated	11.76
Almonds, whole	5.88
Filberts, whole	5.88
<u>Proportions</u>	
Nut mix	85.00
Raisins, 13-15% moisture, coated	15.00

(2) Nut raisin mix ingredients/formulation. Ingredients and formulation percentages for nut raisin mix for one stage fill may be as follows:

<u>Ingredients</u>	<u>Percent by weight</u>
Peanuts, whole, roasted, coated	65.0
Raisins, 13-15% moisture, coated	15.0
Walnuts, pieces, coated	10.0
Almonds, whole	5.0

Filberts, whole

5.0

B. Peanut and walnut coatings. Uniformly coat peanuts and walnuts separately either by spray or dipper application while product tumbles in a revolving pan or cylinder with either the edible shellac, corn protein, or glaze coating material.

(1) Shellac, edible. Edible shellac coating should be a high grade, clear amber shellac. The liquid coating should contain pharmaceutical glaze, ethyl alcohol, and acetylated monoglyceride and should have a solids content of not less than 23 percent and a specific gravity of not less than 0.83.

(2) Coating, corn protein. Corn protein coating should be a natural edible coating consisting of the corn protein zein. The liquid coating should contain 37 percent solids.

(3) Coating, glaze. Glaze coating should be an approximate 5 to 2 ratio mixture of sugar and dry egg whites. Hot water should be used as the solvent. The dry egg whites shall be certified as salmonella free.

C. Raisin coating. Raisins should be oil coated with a 500 hour (AOM) hydrogenated vegetable oil.

SECTION D

D-1 PACKAGING

A. Packaging. The nut raisin mix shall be packed in a preformed pouch or form-fill-seal barrier pouch as described below.

(1) Preformed pouches.

a. Pouch material. The preformed pouch shall be fabricated from 0.003 inch thick ionomer or polyethylene film laminated or extrusion coated to 0.00035 inch thick aluminum foil which is then laminated to 0.0009 inch thick oriented polypropylene. The three plies shall be laminated with the polyester on the exterior of the pouch. The pouch product shall be nitrogen flushed or provided with oxygen scavenger packet. All tolerances for thickness of pouch material shall be plus or minus 20 percent. For MCW, the complete exterior surface of the pouch shall be colored white overall with a color in the range of 37778 through 37886 of FED-STD-595, Colors Used in Government Procurement. For LRP and MRE, the complete exterior surface of the pouch shall be uniformly colored in the range of 20219, 30219, 30279, 30313, 30324, or 30450 of FED-STD-595. The material shall show no evidence of delamination, degradation, or foreign odor when heat sealed or fabricated into pouches. The material shall be suitably formulated for food packaging and shall not impart an odor or flavor to the product.

b. Pouch construction. The pouch shall be a flat style preformed pouch having maximum inside dimensions of 5-1/2 inches wide by 6-3/4 inches long (+1/8 inch in each dimension). The pouch shall be made by heat sealing three edges with 3/8 inch (-1/8 inch, +3/16 inch) wide seals. The heat seals shall be made in a manner that will assure hermetic seals. The side and bottom seals shall have an average seal strength of not less than 6 pounds per inch of width and no individual specimen shall have a seal strength of less than 5 pounds per inch of width when tested as specified in E-5, A., (4), a. Alternatively, the filled and sealed pouch shall exhibit no rupture or seal separation greater than 1/16 inch or seal separation that reduces the effective closure seal width to less than 1/16 inch when tested for internal pressure resistance as specified in E-5, A., (4), c. A tear nick or tear notch shall be made in one or both side seals to facilitate easy opening of the filled and sealed pouch. A 1/8 inch (+1/16 inch) wide lip may be incorporated at the open end of the pouch to facilitate opening and filling of the pouch.

c. Pouch filling and sealing. The nut raisin mix shall be filled into the pouch and shall be nitrogen flushed or provided with oxygen scavenger packets in order to meet the requirements of paragraph C-2, J. The filled pouch shall be sealed. The closure seal

shall be free of foldover wrinkles or entrapped matter that reduces the effective closure seal width to less than 1/16 inch. Seals shall be free of impression or design on the seal surface that would conceal or impair visual detection of seal defects. The average seal strength shall be not less than 6 pounds per inch of width and no individual specimen shall have a seal strength of less than 5 pounds per inch of width when tested as specified in E-5,A.,(4),b. Alternatively, the filled and sealed pouch shall exhibit no rupture or seal separation greater than 1/16 inch or seal separation that reduces the effective closure seal width to less than 1/16 inch when tested for internal pressure resistance as specified in E-5,A.,4,c.

(2) Horizontal form-fill-seal pouches.

a. Pouch material. The horizontal form-fill-seal pouch shall consist of a formed tray-shaped body with a flat sheet, heat sealable cover or a tray-shaped body with a tray-shaped heat sealable cover. The tray-shaped body and the tray-shaped cover shall be fabricated from a 3-ply flexible laminate barrier material consisting of, from outside to inside, 0.0009 inch thick oriented polypropylene bonded to 0.0007 inch thick aluminum foil with 10 pounds per ream pigmented polyethylene or adhesive and bonding the opposite side of the aluminum foil to 0.003 inch thick ionomer or a blend of not less than 50 percent linear low density polyethylene and polyethylene. The linear low density polyethylene portion of the blend shall be the copolymer of ethylene and octene-1 having a melt index range of 0.8 to 1.2 g/10 minutes in accordance with ASTM D 1238, Flow Rates of Thermoplastics by Extrusion Plastometer and a density range of 0.918 to 0.922 g/cc in accordance with ASTM D 1505, Density of Plastics by Density Gradient Technique. Alternatively, 0.0005 inch thick polyester may be used in place of the oriented polypropylene as the outer ply of the laminate. The flat sheet cover shall be made of the same 3-ply laminate as specified for the tray-shaped body except the aluminum foil thickness may be 0.00035 inch. All tolerances for thickness of pouch materials shall be plus or minus 20 percent. The color requirements of the exterior (oriented polypropylene or polyester side) of the laminate shall be as specified in D-1,A.,(1),a. The material shall show no evidence of delamination, degradation, or foreign odor when heat sealed or fabricated into pouches. The material shall be suitably formulated for food packaging and shall not impart any odor or flavor to the product.

b. Pouch construction. The tray-shaped body and the tray-shaped cover shall be formed by drawing the flexible laminate material into an appropriately shaped cavity. The flat cover shall be in the form of a flat sheet of the barrier material taken from roll stock. The nut raisin mix shall be placed into the tray-shaped body of the pouch and shall be nitrogen flushed or provided with an oxygen scavenger packet to meet the requirements of paragraph C-2 J. The filled pouch body shall be hermetically sealed. Pouch closure shall be effected by heat sealing together the cover and body along the entire pouch perimeter. The closure seal width shall be a minimum of 1/8 inch. The closure seal shall have an average seal strength of not less than 6 pounds per inch of width and no individual specimen shall have a seal strength of less than 5 pounds per inch of width when tested as specified in E-5,A.,(4),b. Alternatively, the filled and sealed pouch shall exhibit no rupture or seal separation greater than 1/16 inch or seal separation that reduces the effective closure seal width to less than 1/16 inch when tested for internal pressure resistance as specified in E-5,A.,(4),c. The maximum outside dimensions of the sealed pouch shall be 6 inches wide by 7 1/4 inches long. The closure seal width shall be a minimum of 1/8 inch. A tear nick, a tear notch, or serrations shall be provided on one outside edge or two opposite outside edges of the pouch to facilitate easy opening of the filled and sealed pouch. The sealed pouch shall not show any evidence of material degradation, aluminum stress cracking, delamination or foreign odor. Heat seals shall be free of occluded matter. Seals shall be free of impression or design on the seal surface that would conceal or impair visual detection of seal defects.

(3) Oxygen scavenger packet. The oxygen scavenger (absorber) shall be constructed of materials that are safe for direct and indirect food contact, and shall be suitable for use with edible products. The oxygen scavenger (absorber) shall be in compliance with all applicable FDA and USDA regulations.

D-2 LABELING

A. Pouches. Each pouch shall be clearly printed or stamped, in a manner that does not damage the pouch, with permanent black ink or other, dark, contrasting color which is free of carcinogenic elements or ingredients. The information shall be located on the body of the pouch not closer than 1/16 inch to any seal. If a non-contact type printer is used, the information may be located anywhere on the pouch (in one complete print), except the closure seal area. The label shall contain the following information:

- (1) Product name. (letters not less than 1/8 to 7/16 inch block letters)
- (2) Date 1/
- (3) Net Weight
- (4) Contractor's name and address
- (5) "Nutrition Facts" label in accordance with the Nutrition Labeling and Education Act (NLEA) and all applicable FDA/USDA regulations.

1/ Each pouch shall have the date of pack noted by using a four digit code beginning with the final digit of the current year followed by the three digit Julian day code. For example, February 17, 1999 would be coded as 9048. The Julian day code shall represent the day the product was packaged into the pouch.

D-3 PACKING

A. Packing for shipment to ration assembler. Not more than 40 pounds of pouched product shall be packed flat in layers in a fiberboard shipping container constructed in accordance with style RSC-L, class domestic, variety SW, grade 200 of ASTM D 5118, Standard Practice for Fabrication of Fiberboard Shipping Boxes. Each container shall be securely closed in accordance with ASTM D 1974, Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Shipping Containers.

D-4 MARKING

A. Shipping containers. Shipping containers shall be marked in accordance with DPSC Form 3556, Marking Instructions for Shipping Cases, Sacks and Palletized/Containerized Loads of Perishable and Semiperishable Subsistence.

SECTION E INSPECTION AND ACCEPTANCE

E-5 PACKAGING AND PACKING MATERIALS

Definitions.

(1) Critical defect. A critical defect is a defect that judgment and experience indicate would result in hazardous or unsafe conditions for individuals using, maintaining, or depending on the item; or a defect that judgment and experience indicate is likely to prevent the performance of the major end item, i.e., the consumption of the ration.

(2) Major defect. A major defect is a defect, other than critical, that is likely to result in failure, or to reduce materially the usability of the unit of product for its intended purpose.

(3) Minor defect. A minor defect is a defect that is not likely to reduce materially the usability of the unit of product for its intended purpose, or is a departure from established standards having little bearing on the effective use or operation of the unit.

Quality Assurance Provisions.

The following quality assurance criteria, utilizing ANSI/ASQC Z1.4-1993, Sampling Procedures and Tables for Inspection by Attributes, are recommended.

A. Packaging.

(1) Pouch material certification. Material listed below may be accepted on the basis of a contractor's certification of conformance to the indicated requirements. In addition, compliance to the requirements for inside pouch dimensions and dimensions of manufacturer's seals may be verified by certificate of conformance.

<u>Requirement</u>	<u>Requirement Paragraph</u>	<u>Test procedure</u>
Thickness of films for laminated material	D-1,A.1.(a) and D-1,A.2.(a)	As specified in A-A-3174 <u>1/</u> except that a machinists' micrometer may be used provided that its graduations and accuracy conform to the requirements of A-A-3174
Aluminum foil thickness	D-1,A.1.(a)and D-1,A.2.(a)	As specified in ASTM B, 479 <u>2/</u>
Laminated material identification and construction	D-1,A.1.(a) and D-1,A.2.(a)	Laboratory evaluation
Color of laminated material	D-1,A.1.(a) and D-1,A.2.(a)	Visual evaluation with FED-STD-595 <u>3/</u>

1/ FED A-A-3174, Plastic Sheet and Strip, Polyolefin

2/ ASTM-B-479 Specification for Annealed Aluminum Foil For Flexible Barrier Application

3/ FED-STD-595 Colors Used in Government Procurement

(2) Unfilled preformed pouch certification. A certification of conformance may be accepted as evidence that unfilled pouches conform to the requirements specified in D-1,A.,(1),a and b. When deemed necessary by the USDA, testing of the unfilled preformed pouches for seal strength shall be a specified in E-5,A.,(4),a.

(3) Filled and sealed pouch examination. The filled and sealed pouches shall be examined for the defects listed in table I. The lot size shall be expressed in pouches. The sample unit shall be one pouch. The inspection level shall be I and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 0.65 for major defects and 2.5 for minor defects.

TABLE I. Filled and sealed pouch defects 1/

<u>Category</u>		<u>Defect</u>
<u>Major</u>	<u>Minor</u>	
101		Tear, hole, or open seal.
102		Seal width less than 1/16 inch. <u>2/</u>
103		Presence of delamination. <u>3/</u>
104		Unclean pouch <u>4/</u>
105		Pouch has foreign odor
106		Any impression or design on the heat seal surfaces which conceals or impairs visual detection of seal defects. <u>5/</u>
107		Not packed as specified.

- 108 Presence of stress cracks in the aluminum foil. 6/ 7/
- 201 Label smudges, is missing, incorrect, or illegible.
- 202 Tear nick, notch or serrations missing or does not facilitate easy opening.
- 203 Seal width less than 1/8 inch but greater than 1/16 inch.
- 204 Presence of delamination. 3/

1/ Any evidence of rodent or insect infestation shall be cause for rejection of the lot.

2/ The effective closure seal is defined as any uncontaminated, fusion bonded, continuous path, minimum 1/16 inch wide, from side seal to side seal that produces a hermetically sealed pouch.

3/ Delamination defect classification:

Major - Delamination of the outer ply in the pouch seal area that can be propagated to expose aluminum foil at the food product edge of the pouch after manual flexing of the delaminated area. To flex, the delaminated area shall be held between the thumb and forefinger of each hand with both thumbs and forefingers touching each other. The delaminated area shall then be rapidly flexed 10 times by rotating both hands in alternating clockwise- counterclockwise directions. Care shall be exercised when flexing delaminated areas near the tear notches to avoid tearing the pouch material. After flexing, the separated outer ply shall be grasped between thumb and forefinger and gently lifted toward the food product edge of the seal or if the separated area is too small to be held between thumb and forefinger, a number two stylus shall be inserted into the delaminated area and a gentle lifting force applied against the outer ply. If separation of the outer ply can be made to extend to the product edge of the seal with no discernible resistance to the gentle lifting, the delamination shall be classified as a major defect. Additionally, spot delamination of the outer ply in the body of the pouch that is able to be propagated beyond its initial borders is also a major defect. To determine if the laminated area is a defect, use the following procedure: Mark the outside edges of the delaminated area using a bold permanent marking pen. Open the pouch and remove the contents. Cut the pouch transversely not closer than 1/4 inch (+1/16 inch) from the delaminated area. The pouch shall be flexed in the area in question using the procedure described above. Any propagation of the delaminated area, as evidenced by the delaminated area exceeding the limits of the outlined borders, shall be classified as a major defect.

Minor - Minor delamination of the outer ply in the pouch seal area is acceptable and shall not be classified as a minor defect unless it extends to within 1/16 inch of the food product edge of the seal. All other minor outer ply delamination in the pouch seal area or isolated spots of delamination in the body of the pouch that do not propagate when flexed as described above shall be classified as minor defects.

4/ Outer packaging shall be free from foreign matter which is unwholesome, has the potential to cause pouch damage (for example, glass, metal filings) or generally detracts from the clean appearance of the pouch. The following examples shall not be classified as defects for unclean:

a. Foreign matter which presents no health hazard or potential pouch damage and which can be readily removed by gently shaking the package or by gently brushing the pouch with a clean dry cloth.

b. Dried product which affects less than 1/8 of the total surface area of one pouch face (localized and aggregate).

c. Water spots.

5/ If doubt exists as to whether or not the sealing equipment leaves an impression or design on the closure seal surface that could conceal or impair visual detection of seal defects, samples shall be furnished to the contracting officer for a determination as to acceptability.

6/ Applicable to form-fill-seal pouches only.

7/ To examine for stress cracks, the inside surface of both tray-shaped bodies shall be placed over a light source and the outside surface observed for the passage of light. Observation of light through the pouch material in the form of a curved or straight line greater than 2 mm in length shall be evidence of the presence of stress cracks. Observation of light through the pouch material in the form of a curved or straight line 2 mm in length or smaller or of a single pinpoint shall be considered a pinhole. Observation of ten or more pinholes per pouch shall be evidence of material deradiation.

(4) Seal testing. The pouch seals shall be tested for seal strength as required in a, b, or c, as applicable.

a. Unfilled preformed pouch seal testing. The seals of the unfilled preformed pouch shall be tested for seal strength in accordance with ASTM F 88 - Seal Strength of Flexible Barrier Materials. The lot size shall be expressed in pouches. The sample size shall be the number of pouches indicated by inspection level S-1. Three adjacent specimens shall be cut from each of the three sealed sides of each pouch in the sample. The average seal strength of any side shall be calculated by averaging the three specimens cut from that side. Any average seal strength of less than 6 pounds per inch of width or any test specimen with a seal strength of less than 5 pounds per inch of width shall be cause rejection of the lot.

b. Pouch closure seal testing. The closure seals of the pouches shall be tested for seal strength in accordance with ASTM F 88. The lot size shall be expressed in pouches. The sample size shall be the number of pouches indicated by inspection level S-1. For the closure seal on preformed pouches, three adjacent specimens shall be cut from the closure seal of each pouch in the sample. The average seal strength of any side, end or closure shall be calculated by averaging the three specimens cut from that side, end or closure. Any average seal strength of less than 7 pounds per inch of width or any test specimen with a seal strength of less than 6 pounds per inch of width shall be cause for rejection of the lot.

c. Internal pressure test. The internal pressure resistance shall be determined by pressurizing the pouches while they are restrained between two rigid plates. The sample size shall be the number of pouches indicated by inspection level S-1. If a three seal tester (one that pressurizes the pouch through an open end) is used, the closure seal shall be cut off for testing the side and bottom seals of the pouch. For testing the closure seal, the bottom seal shall be cut off. The pouches shall be emptied prior to testing. If a four-seal tester (designed to pressurize filled pouches by use of a hypodermic needle through the pouch wall) is used, all four seals can be tested simultaneously. The distance between rigid restraining plates on the four-seal tester shall be equal to the thickness of the product +1/16 inch. Pressure shall be applied at the approximate uniform rate of 1 pound per square inch gage (psig) per second until 14 psig pressure is reached. The 14 psig pressure shall be held constant for 30 seconds and then released. The pouches shall then be examined for separation or yield of the heat seals. Any rupture of the pouch or evidence of seal separation greater than 1/16 inch in the pouch manufacturer's seal shall be considered a test failure. Any seal separation that reduces the effective closure seal width to less than 1/16 inch (see table I, footnote 2/) shall be considered a test failure. Any test failure shall be cause for rejection of the lot.

B. Packing.

(1) Shipping container examination. The filled and sealed shipping containers shall be examined for the defects listed below. The lot size shall be expressed in shipping

containers. The sample unit shall be one shipping container fully packed. The inspection level shall be S-3 and the AQL, expressed in terms of defects per hundred units, shall be 4.0 for major defects and 10.0 for total defects.

- Major: National stock number, item description, contract number, name and address of producer, or date of pack missing, incorrect or illegible
Container not properly closed
Components missing, damaged, or not as specified
- Minor: Other required markings missing, incorrect, or illegible
More than 40 pounds of product

E-6 QUALITY ASSURANCE PROVISIONS (PRODUCT)

A. Classification of inspections. The inspection requirements specified herein are classified as follows:

(1) Product standard inspection. The first article or product demonstration model shall be inspected in accordance with the provisions of this Performance-based Contract Requirements document and evaluated for overall appearance and palatability. Any failure to conform to the performance requirements or any appearance or palatability failure shall be cause for rejection.

(2) Conformance inspection. Conformance inspection shall include the product examination and the methods of inspection cited in this section.

B. Product examination. The finished product shall be examined for compliance with the performance requirements specified in Section C of this Performance-based Contract Requirements document utilizing the single sampling plans indicated in ANSI/ASQC Z1.4 - 1993. The lot size shall be expressed in pouches. The sample unit shall be the contents of one pouch. The inspection level shall be S-3 and the AQL, expressed in terms of defects per hundred units, shall be 1.5 for major defects and 6.5 for minor defects. Defects and defect classifications are listed in table II.

TABLE II. Product defects 1/ 2/ 3/ 4/ 5/ 6/ 7/

Category		Defect
<u>Major</u>	<u>Minor</u>	
		<u>Appearance</u>
101		Nuts raisin mix not free flowing. 8/
102		Coating on the peanuts or walnuts or raisins is missing or not as specified.
	201	Nuts or raisins do not have characteristic color.
		<u>Odor and flavor</u>
103		Odor or flavor not characteristic of a mix of unsalted, shelled, peanuts, walnuts, almonds, filberts, and raisins.
		<u>Texture</u>
	202	Nuts not firm to crunchy.
	203	Raisins not moist or not chewy.
		<u>Weight</u>
	204	Net weight of an individual pouch less than 56 grams.

Other

104 Pouch does not contain one intact oxygen scavenger packet. 9/

1/ Presence of any foreign materials such as, but not limited to dirt, insect parts, hair, glass, wood, or metal, or foreign odors and flavors such as but not limited to burnt, scorched, rancid, sour, stale, musty or moldy shall be cause for rejection of the lot.

2/ Finished product not equal to or better than the approved product standard in palatability and overall appearance shall be cause for rejection of the lot.

3/ The percentage of nut and raisin components shall be determined using the following procedure: The total contents of twenty pouches shall be weighed and the individual ingredients of the composite shall be separated and weighed separately. The percentages of each component shall be determined and the results reported to the nearest 0.1 percent. Any nonconformance shall be cause for rejection of the lot.

4/ The moisture content of the raisins shall be verified by the producer's certificate of conformance.

5/ The producer shall provide a USDA certificate that the peanuts are aflatoxin negative in accordance with the USDA Marketing Agreement.

6/ Grade standard requirements for nuts and raisins shall be verified with a USDA Grade Certificate.

7/ Level of antioxidants in nut mix shall be verified by producer's certificate of conformance.

8/ Clumps can be broken with light finger pressure.

9/ Not applicable if nitrogen flushed.

C. Methods of inspection.

(1) Net weight. The net weight shall be determined by weighing each sample unit on a suitable scale tared with a representative empty pouch and oxygen scavenger packet, when applicable. Results shall be reported to the nearest 1 gram.

(2) Shelf life. The contractor shall provide a certificate of conformance that the product has a 3 year shelf life when stored at 80°F. Government verification may include storage for 6 months at 100°F or 36 months at 80°F. Upon completion of either storage period, the product will be subjected to a sensory evaluation panel for appearance and palatability and must receive an overall score of 5 or higher based on a 9 point hedonic scale to be considered acceptable.

(3) Nutrient content. The sample to be analyzed shall be a composite of eight filled and sealed pouches, which have been selected at random from the lot. The composited sample shall be prepared and analyzed for sodium content in accordance with the following methods of the Official Methods of Analysis of AOAC International:

<u>Test</u>	<u>Method Number</u>
Sodium	985.35, 984.27

Test results shall be reported to the nearest 1.0 mg per 100 grams. Any result not conforming to the requirements specified in Section C of this Performance-based Contract Requirements document shall be cause for rejection of the lot.

NOTE: The USDA will use AOAC Method 935.52 for preparation of sample.

(4) Moisture content testing. The moisture content shall be determined in accordance with AOAC Method No. 925.45A except that the temperature-time cycle for moisture analysis shall be modified by using a temperature of 70°C for 16 hours at a pressure of not more than 100 mm of mercury. The contents of each pouch shall be blended to uniformity using a blender or food processor. Results shall be reported to the nearest 0.1 percent. The lot size shall be expressed in units of pouches. The sample unit shall be one filled and sealed pouch. The inspection level shall be S-2 and the AQL, expressed in terms of defects per hundred units, shall be 2.5. Any individual moisture greater than 5.6 percent shall be classified as a major defect. The lot shall be rejected if the average moisture is greater than 4.6 percent.

(5) Oxygen content testing. Eight filled and sealed pouches shall be randomly selected from each lot and individually tested for oxygen content in accordance with any USDA approved test method. Testing shall be accomplished after the filled and sealed pouches have been allowed to equilibrate at room temperature for not less than 48 hours from the time of sealing. Results shall be reported to the nearest 0.1 percent. Any result failing to conform to the requirement in C-2,J. shall be cause for rejection of the lot.

NOTE: The following conditions apply for aflatoxin testing on nut raisin mix:

- (1) For prepackaged product received from a supplier and is not further processed, the contractor will furnish a Certificate of Analysis that the aflatoxin in the roasted peanuts (in the case of roasted peanuts end item) represented is not greater than 15 parts per billion (ppb). No additional testing is required.
- (2) For roasted peanuts received in bulk (to be used in nut raisin mix end item), the contractor shall have the bulk shipment sampled and tested by USDA. If (a) the bulk shipment is not more than 2 ppb for aflatoxin as evidenced by a USDA Certificate, (b) the end item lots are manufactured using that bulk product, and (c) both the bulk and end item lots' identities have been preserved, then no further aflatoxin testing is required.
- (3) If roasted peanuts are received in bulk (to be used in nut raisin mix end item), and the conditions in (2) above are not met, the bulk roasted peanut product may not be used as an ingredient. Rework or segregation of portions of the bulk lot, and further testing may be considered on a case by case basis.

SECTION J REFERENCE DOCUMENTS

DPSC FORMS

DPSC FORM 3556 Marking Instructions for Shipping Cases, Sacks and Palletized/Containerized Loads of Perishable and Semiperishable Subsistence, May 96

FEDERAL SPECIFICATION

A-A-3174 Plastic Sheet and Strip, Polyolefin

FEDERAL STANDARD

FED-STD-595 Colors Used in Government Procurement

NON-GOVERNMENTAL STANDARDS

AMERICAN SOCIETY FOR QUALITY CONTROL (ASQC)

ANSI/ASQCZ1.4-1993 Sampling Procedures and Tables for Inspection by Attributes

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

B 479 Specification for Annealed Aluminum Foil For Flexible Barrier Application
D 1238 Flow Rates of Thermoplastics by Extrusion Plastometer
D 1505 Density of Plastics by Density Gradient Technique
D 1974 Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Shipping Containers
D 5118 Standard Practice for Fabrication of Fiberboard Shipping Boxes
F 88 Seal Strength of Flexible Barrier Materials

AOAC INTERNATIONAL Official Methods of Analysis of the AOAC International

AMSSB-RCF-FN (Valvano/4259)

14 August 2003

TO: DSCP-HRAC (Lowry/7773)

Subject: ES 03-094; DSCP-SS-03-03266; Document changes; inserting new verification conditions for microbiological and aflatoxin requirements

Date recv'd: 3 Apr 03

Date due: 24 Apr 03

Date extended: OPEN

Date replied: 14 August 03

Refs:

(a) Conference call (Natick/USDA/DSCP/User Services Reps/Vetcom), Feb 10, 2003, subject: Salmonella Testing, discuss issue from JSORF on salmonella testing of commercial vs. military products

(b) Follow up to ES02-189; dated 4 Mar 03, subject: Document changes, PCR-D-002 Dairyshake Powder, Fortified with Calcium and Vitamin D, Packaged in a Flexible Pouch; A-A-20043A Creamer, Nondairy, Dry; PKG&QAP for A-A-20336 Coffees, Flavored, Instant, Powdered; MIL-C-3031J Cocoa Beverage Powder, inserting new verification conditions for Salmonella negative requirements

(c) Govt meeting at R&DA May 29 03, subject: Discuss verification for Salmonella, aflatoxin, and microbiology requirements

1. Based on the ref case, DSCP requested that Natick apply the same verification criteria for microbiological testing methods in the subject documents as well. Aerobic plate and standard plate and coliform counts and aflatoxin levels would be covered using this new verification process. The documents affected are as follows:

PKG&QAP for A-A-20043A Creamer, Nondairy, Dry
PKG&QAP for A-A-20336 Coffees, Flavored, Instant, Powdered
MIL-C-3031J Cocoa Beverage Powder
PCR-D-002 Dairyshake Powder, Fortified with Calcium and Vitamin D, Packaged in a Flexible Pouch
PCR-N-002 Nut Raisin Mix
PKG&QAP for A-A-20164B Nuts, Shelled
PKG&QAP for A-A-20328 Peanut Butter and Peanut Spread

2. In ref a and c, the discussion on Salmonella determined:

(a) Services restated the requirement that salmonella negative was a valid requirement; and

(b) Differences exist between product received in packets (and product not further processed except for overwrapping or placement in accessory or meal bag), and product

received in bulk and filled into packets for assembly, and whether a certificate of analysis (COA) is acceptable in lieu of testing.

3. Based on a review of the subject case and ref a and c, it was decided to include MICROBIOLOGICAL VERIFICATION with the salmonella statement. Separate statements will also be added for those items needing AFLATOXIN NEGATIVE VERIFICATION testing. These will be additional verifications added to the documents, which may already include the salmonella version.

4. Natick requests DSCP implement the changes cited below for the subject documents for all current, pending, and future procurements until the documents are formally amended or revised:

(a) In the documents (coffee flavored, cocoa beverage powder, nondairy creamer & dairyshake powder) section where the microbiological testing paragraph is specified, delete the current "salmonella statement" and insert the following statements at the end:

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"NOTE: The following conditions apply for salmonella and microbiological testing:

- (1) For prepackaged product received from a supplier and is not further processed, the contractor will furnish a Certificate of Analysis that the product represented is Salmonella Negative and meets all microbiological requirements.
- (2) For bulk product received, the contractor is responsible for providing a certificate of analysis stating that the bulk product is Salmonella negative and meets all microbiological requirements. USDA salmonella and additional microbiological testing is required for each end item lot and shall be the basis for lot acceptance with respect to Salmonella and other microbiological testing requirements."

(b) In the documents (nuts shelled & nut raisin mix & peanut butter spread) section where the aflatoxin testing paragraph is specified, insert the following statements at the end:

"NOTE: The following conditions apply for aflatoxin testing on nuts shelled:

- (1) For prepackaged product received from a supplier and is not further processed, the contractor will furnish a Certificate of Analysis that the aflatoxin in the roasted peanuts (in the case of roasted peanuts end item) represented is not greater than 15 parts per billion (ppb). No additional testing is required.
- (2) For roasted peanuts received in bulk (to be used in roasted peanuts end item), the contractor shall have the bulk shipment sampled and tested by USDA. If (a) the bulk shipment is not more than 2 ppb for aflatoxin as evidenced by a USDA Certificate, (b) the end item lots are manufactured using that bulk product, and (c) both the bulk and end item lots' identities have been preserved, then no further aflatoxin testing is required.
- (3) If roasted peanuts are received in bulk (to be used in roasted peanuts end item), and the conditions in (2) above are not met, each end-item lot must be sampled and tested by USDA. End item lots determined to be not greater than 15 ppb in aflatoxin as evidenced by a USDA Certificate will be considered acceptable. Bulk roasted peanuts with aflatoxin greater than 15 ppb shall not be used as ingredients."

"NOTE: The following conditions apply for aflatoxin testing on nut raisin mix:

- (4) For prepackaged product received from a supplier and is not further processed, the contractor will furnish a Certificate of Analysis that the aflatoxin in the roasted peanuts (in the case of roasted peanuts end item) represented is

not greater than 15 parts per billion (ppb). No additional testing is required.

- (5) For roasted peanuts received in bulk (to be used in nut raisin mix end item), the contractor shall have the bulk shipment sampled and tested by USDA. If (a) the bulk shipment is not more than 2 ppb for aflatoxin as evidenced by a USDA Certificate, (b) the end item lots are manufactured using that bulk product, and (c) both the bulk and end item lots' identities have been preserved, then no further aflatoxin testing is required.
- (6) If roasted peanuts are received in bulk (to be used in nut raisin mix end item), and the conditions in (2) above are not met, the bulk roasted peanut product may not be used as an ingredient. Rework or segregation of portions of the bulk lot, and further testing may be considered on a case by case basis."

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"NOTE: The following conditions apply for aflatoxin testing on peanut butter spread:

- (1) For prepackaged peanut butter received from a supplier and is not further processed, the contractor will furnish a Certificate of Analysis that the product represented is not greater than 15 ppb for aflatoxin.
- (2) For bulk peanut butter received, the contractor is responsible for providing a USDA certificate of analysis stating that the bulk product is not greater than 15 ppb in aflatoxin. When end item lots are manufactured using that bulk peanut butter and both the bulk and end item lots' identities have been preserved, then no further aflatoxin testing is required.
- (3) If peanut butter is received in bulk, and the conditions in (2) above are not met, each end-item lot must be sampled and tested by USDA. End item lots determined to be not greater than 15 ppb in aflatoxin as evidenced by a USDA Certificate will be considered acceptable. Bulk peanut butter with aflatoxin greater than 15 ppb shall not be used as an ingredient.

(c) With regard to the MRE components using roasted peanuts, the following note should be included in those applicable DSCP contracts in order that the end item contain the most recent crop of product:

"Note: A USDA certificate of analysis on roasted peanuts from the most recent crop year which have been kept in cold storage (between approximately 40-50 deg. F at low humidity) is acceptable. Contractor must attest to these storage conditions. If storage conditions for roasted peanuts are not established, a USDA certificate of analysis on roasted peanuts will be considered current if not more than 30 days have elapsed since the date of the analysis."

5. The changes will be made to the Natick prepared documents either in the item document or the PKGQAP supplement, as applicable. For DSCP prepared documents, the following notes apply:

(a) For A-A-20043A Creamer Nondairy Dry and A-A-20336 Cofees Flavored, Instant, the microbiological testing for standard plate and coliform counts is specified in the CID. Normally DSCP would need to make a change to the CID; however, in this case, Natick will insert the salmonella and microbiological verification in the PKGQAP for these items in the methods of inspection section.

(b) For A-A-20164B Nuts, Shelled and A-A-20328 Peanut Butter, the aflatoxin testing is specified in the CID. Normally DSCP would need to make a change to the CID; however, in this case, Natick will insert aflatoxin verification in the PKGQAP for these items in the methods of inspection section.

6. The updated applicable document files are attached with this message.

7 attachments

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Combat Feeding Directorate

R Valvano

CF: NSC:

Aylward	Trottier
Bennett	Valvano
Friel	Arcidiocona
Hamlin	
Hill	
Richards	
Sherman	Lowry

CF: DSCP & SVCs:

Anthony	Beward
Arthur	Malason
Ferrante	Miller
Galligan	Richardson H.
Kavanagh	Salerno